L-90

WOODEN TURNTABLE WITH USB CONNECTION AND BUILT-IN PRE AMPLIFIER

User Manual

www.lenco.eu

V1.0

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Dear customer,

Thank you for buying this Lenco product. Quality and usability is our top priority. In order to let you fully enjoy this turntable, we have manufactured this product using high quality standards, materials, components, and care.

Please read all safety instructions and national restrictions, before you use this turntable.

Note:

This user manual was printed prior to the development of this product. When operability or other functions needed improvement, priority went to the product specification itself, and not to this manual.

In such instances, the instruction manual may not entirely match all the functions of the actual product. Therefore, the actual product and packaging, as well as the name and illustration, may differ from the manual. The screen shown as an example in this manual may differ from the actual screen display.

Lenco is not liable for any consequential damage.

What is in the box?

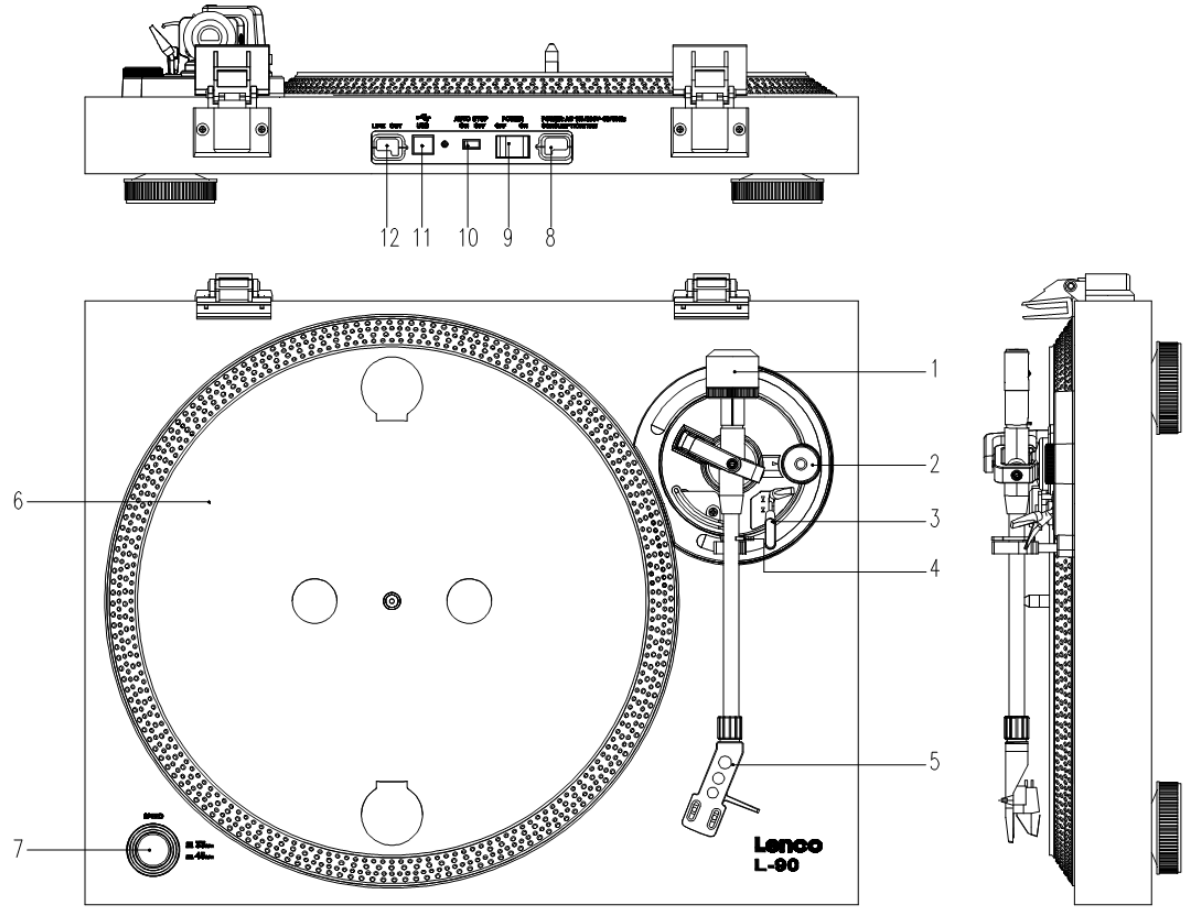
This turntable has been assembled with the utmost care. If, however, an accessory is missing, please contact your local dealer immediately.

Check the supplied accessories:

1 x Turntable
1 x Cartridge
1 x Platter inclusive belt
1 x Rubber plate
1 x Dust cover
2 x hinge
1 x USB Cable
1 x Single puck

1 x Quick Guide

Exploring the turntable



1. Counterweight, use the counterweight to balance the tone arm.
2. Anti-Skating control: sets the anti-skating. Use anti-skating to prevent the cartridge from swinging in towards the centre.
3. Tone arm lever: lowers or raises the tone arm.
4. Tone arm lock: locks the tone arm if the turntable is not in use.
5. Head shell: holds the removable stylus. When the turntable is not in use, it is recommendable to place the removable protection cover on the stylus.
6. Platter: this is where you place your record, before playing it.
7. 33/45 RPM switch: sets the playing speed.
8. Power cord: connects the turntable to an AC wall outlet.
9. Main power switch: switches the power on or off.
10. Auto stop switch: this function is for 33 RPM records only. After the record is finished, the platter automatically stops rotating.
11. USB port: connects the turntable to your computer.
12. Line out: connects the turntable to a mixer or an audio system

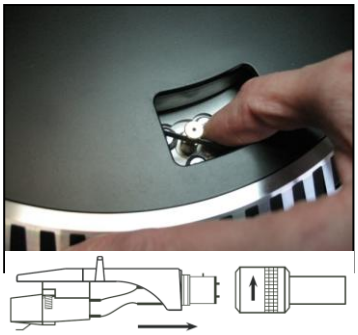
Important note: *This turntable has a built-in amplifier to avoid damage to the turntable or to your audio-system. Do not connect this turntable to your audio-system by using the phone-input as this input is amplified as well.*

Getting started

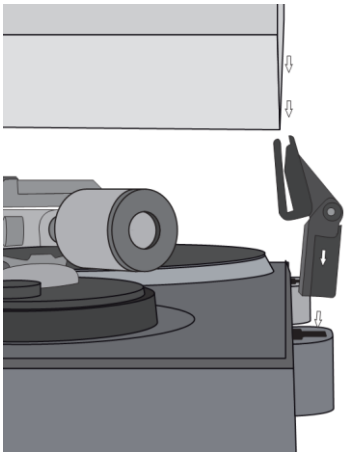
Where to install

Keep the turntable out of direct sunlight. When the turntable is not in use, place it on a sturdy platform of which the surface should be flat and steady, so the turntable cannot fall. Make sure the turntable is stored in such a manner that no object can fall on it, as pressure will damage or break the turntable. Prevent insertion of small objects into the ventilation slots, or openings in the cabinet at all time.

Installation of the turntable



1. Open the box and unpack all parts.
2. Put the platter on the turntable and mount the belt. The belt is on the downside of the platter.
3. Install the cartridge by placing it on the tone arm and turn the tone arm's anti-skate corkscrew until the cartridge is fixed.
4. Mount and set the counterweight.
   - Screw the counterweight on the tone arm.
   - Unlock the tone arm.
   - Remove the protective cover of the stylus. Make sure you do not touch the stylus, nor that the stylus touches anything.
   - Lift the tone arm from the armrest and lower the armrest.
   - Move the counterweight **carefully** a little either to the left or to the right until the tone arm is in balance and floats horizontally.
   - Bring the tone arm back to the armrest and lock the armrest in such a manner that the tone arm cannot move during installation.
   - Move the black plastic part of the counterweight to 0. The 0 should be in line with the red line on the tone arm. Be careful that you do not move the metal part.
   - Turn the metal part to the left to increase the needle pressure. Lenco recommends to set the needle pressure to 2,5.
5. Set the anti-skating. Lenco recommends equaling the anti-skating to the needle pressure.
6. Place the hinges and mount the dust cover.
7. Connect the AC cable to the wall outlet.



8. Connect the line out cables to a mixer or HiFi system.
   Important note: *This turntable has a built-in amplifier to avoid damage on the turntable or your audio-system. Do not connect this turntable to your audio-system by using the phone-input because this input is also amplified.*

Basic operation

Playing records

Switch the main power switch on the backside of the turntable to the *"on"* position. Open the dust cover and place the record on the platter. If you play a single, do not forget to place the single puck first.

- Set the correct RPM speed
- Remove the needle protection cover from the stylus
- Unlock the tone arm on the armrest
- Bring the tone arm to the record, the platter now starts rotating
- Carefully place the tone arm on the record. Do not forget to lower the arm lever

If you want to interrupt a record during playing, raise the arm lever. Alternatively, return it to the armrest to stop the record playing. When a record has come to its end, the platter stops rotating*.

*Auto-stop should be on.

Connect the turntable to a computer for the first time

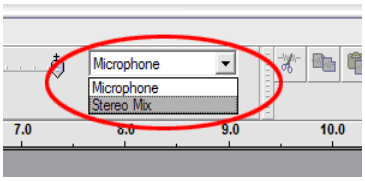
- As this turntable is plug-and-play, no drivers are needed.
- Before you connect the turntable to a computer, unplug it from your mixer or Hi-Fi system.
- The included software is a third party application and therefore Lenco does not handle any questions or problems regarding the software.

1. Switch the computer on
2. Connect the turntable to an AC wall outlet
3. Place the main power switch on the back side of the turntable in the *"on"* position
4. If the computer is booted, connect the turntable. The computer will now install the drivers.
5. After the drivers are installed, you must now install the Audacity software.
   - For windows users; insert the CD or download the newest software via http://audacity.sourceforge.net
   - For MAC users; download the newest software via http://audacity.sourceforge.net

Important: Make sure that your computer recognizes the turntable as a recording device. Especially Windows has the tendency to set the turntable default as a playing device. If the turntable is set as playing device, Audacity cannot record your records.

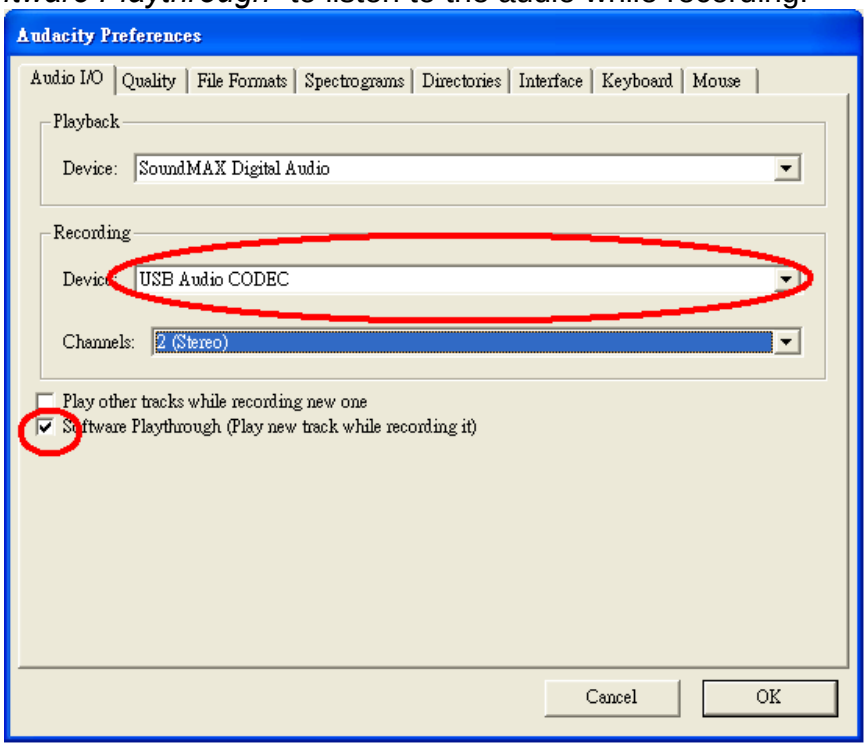
Software Configuration (Windows XP, Vista, MAC)

1. Connect the turntable to the computer.
   Note: Before connecting the turntable to the PC, disconnect the turntable from your audio-system.
2. Start the Audacity software
3. Click on Microphone in the drop down menu and select "Stereo Mix"


Microphone
Microphone
Stereo Mix
7.0
8.0
9.0
10.0

Select the *"Edit"* menu and then *"Preferences"*

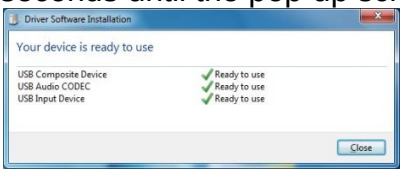
4. Select the USB audio device under the *"Recording"* selection as shown in the example below.
5. Select *"Software Playthrough"* to listen to the audio while recording.



6. Press *"okay"* to save your settings.
7. The software is now ready to start recording.

Software Installation & Configuration (Windows 7)

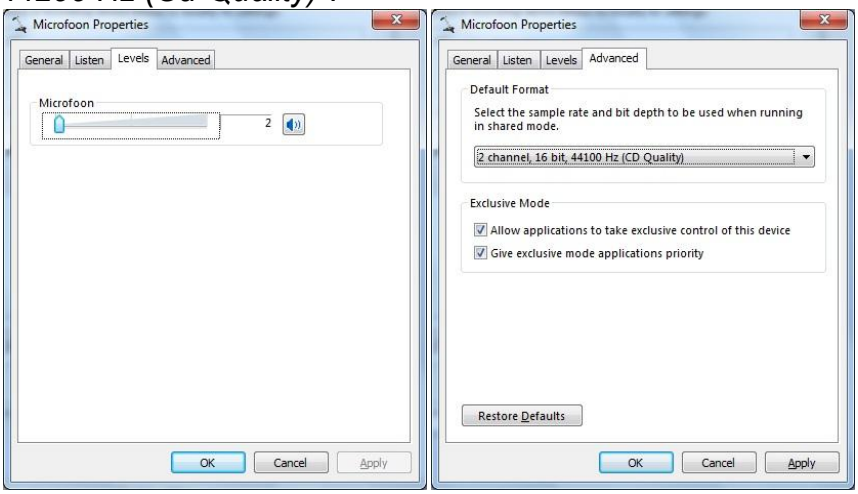
1. Connect the turntable to the AC power outlet.
2. Connect the turntable to a USB socket on your computer. Wait for several seconds until the pop-up screen appears, as shown in the example below.



3. Click on *"close"*.

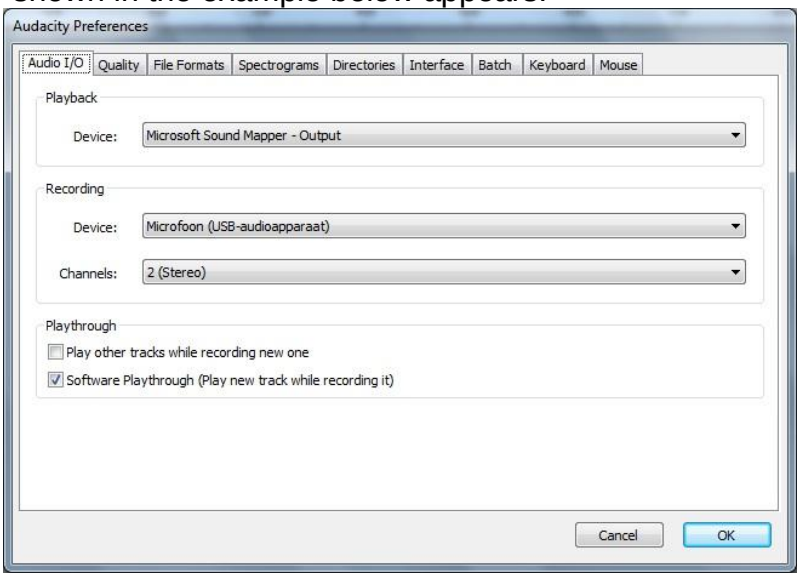
4. Click with the right mouse-button on the speaker icon (taskbar) and select *“recording”*. The screen as shown in the example below appears.

5. Click on *“microphone USB audio device”*.
6. Click on *“properties”*.
7. Go to the Tab *"levels"* and move the volume slider down to level 2 as shown in example below.
8. Go to the tab *“advanced”* and select in the pull-down menu: *“2 channel, 16 bit, 44100 Hz (Cd-Quality)”*.

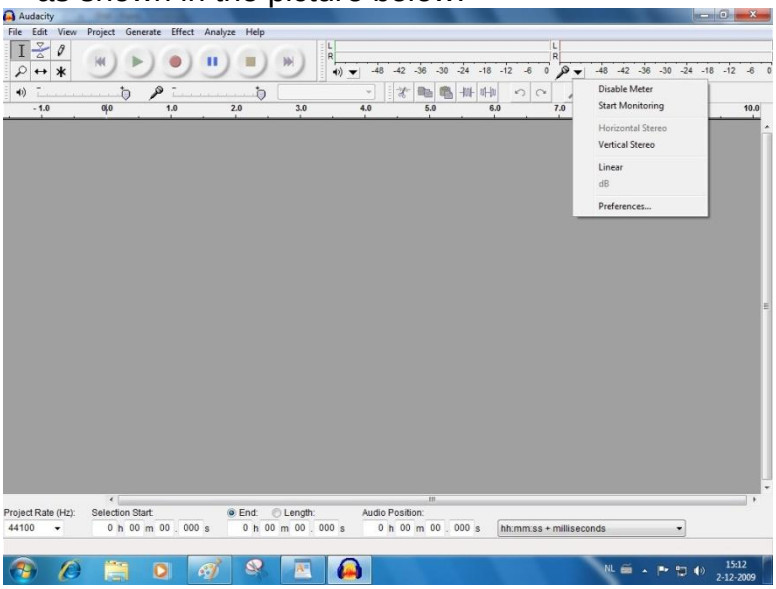


9. Click consecutively on *“apply”*, *“OK”* and once again on *“OK”* (now all programs are closed).
10. Insert the Audacity software CD into the disk drive, or download new software, free of charge, via http://audacity.sourceforge.net/.
11. Follow the installation instructions as described in the instruction manual.
12. Run the Audacity software.

13. Go to the taskbar and click on *"edit"* and then on *"preferences"*. The screen as shown in the example below appears.



14. Go to the *“recording device”* pull-down menu and select the option *“microphone”* (USB-audio device).
15. Go to the *“channels”* pull-down menu and select option 2 (stereo)
16. Mark the selection box *“software play through”* (play new track while recording it)”.
17. Click on *“OK”.*
18. Go to the *“microphone”* icon in the pull-down menu and select *“start monitoring”*, as shown in the picture below.



The software is now set and you can start digitalizing your records.

Digitalizing records

- As this turntable is plug-and-play, no drivers are needed.
- Before you connect the turntable to a computer, unplug it from your mixer or Hi-Fi system.
- The included software is a third party application and therefore Lenco does not support questions or problems with or about the software.

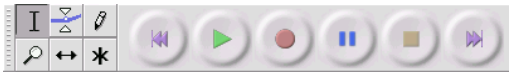
1. Switch the computer on
2. Connect the turntable to an AC wall outlet
3. Place the main power switch on the back side of the turntable in the *"on"* position
4. If the computer is booted, connect the turntable and boot the Audacity software.

Important: Check that your computer recognizes the turntable as a recording device. Especially Windows has the tendency to set the turntable as the default playing device. If the turntable is set as playing device, Audacity cannot record your records.

The Audacity guide

For a complete user guide visit http://audacity.sourceforge.net/

Toolbars



Selection tool: selects the range of audio you want to edit or listen to.

Envelope tool: changes the volume over time.

Draw tool: modifies individual samples.

Zoom tool: zooms in and out.

Time shift tool: slides a track to the left or right.

Multi tool: accesses all of these tools at once depending on the location of the mouse and the keys you are holding down.

Audio Control Buttons

Skip to Start: moves the cursor to time 0 (i.e. the beginning of a song). If you press Play at this point, your project will play from the beginning.

Play: plays audio at the cursor position. If you have selected some audio, only said selection is played.

Loop: if you press and hold the *"shift"* key, the *"play"* button changes to a *"loop"* button, enabling you to play the selection repeatedly.

Record: records audio at the project's sample rate (the sample rate in the lower-left corner of the window). The new track will begin at the current cursor position, so click the *"skip to start"* button first if you want the track to begin at time 0 (i.e. the beginning of a song).

Pause: temporarily stops playback or recording until you press *"pause"* again.

Stop: stops recording or playing. You must do this before applying *"effects", "saving",* or *"exporting"*.

Skip to End: moves the cursor to the end of the last track.

The "Edit" Toolbar

All buttons in this toolbar perform actions - and with a couple of exceptions, they are all just shortcuts of existing menu items, enabling you to save time using the menu. Put the mouse on a tool icon to see a "tooltip", in case you forget which one is which.

Cut

Copy

Paste

Trim away the audio outside the selection

Silence the selected audio

Undo

Redo (repeat last command).

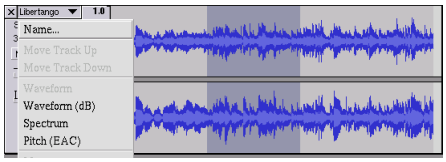
Zoom In

Zoom Out

Fit selection in window: zooms until the selection just fits inside the window.

Fit project in window: zooms until all of the audio just fits inside the window.

The "Track Pop-Down" Menu



If you click on the title of a music track, the *"track"* pop-down menu appears. This lets you access a few special commands that apply to individual tracks.

Name: here you can change the name of the track.

Move Track Up: exchanges places with the track above.

Move Track Down: exchanges places with the track below.

Waveform: sets the display to *"waveform".* This is the default method to visualize the audio.

Waveform (dB): this is similar to Waveform, but measured in decibels (dB), on a logarithmic scale.

Spectrum: displays the track as a spectrogram, showing the amount of energy in different frequency bands.

Pitch (EAC): highlights the outline of the fundamental frequency (musical pitch) of the audio, using the Enhanced Autocorrelation (EAC) algorithm.

Mono: the sound comes from just one speaker, either the right, or the left.

Left Channel: plays the track only thru the left speaker.

Right Channel: plays the track only thru the right speaker.

Make Stereo Track: if there is another track below the one playing, this feature joins them into a single stereo track. The top track represents the left speaker, while the bottom track represents the right speaker. When tracks are joined into a stereo pair, all edits automatically apply to both channels.

Split Stereo Track - if the selected track is a stereo track (a pair of left and right tracks joined as a single track), this operation splits them into two separate tracks, which you can modify, and edit, independently.

Set Sample Format: determines the quality of the audio data, and the amount of disk space it requires. 16-Bit is the quality used by audio CD's and is the minimum quality that Audacity uses internally (8-bit audio files are automatically converted when you open them). 24-Bit is used in higher-end audio hardware. 32-Bit *float* is the highest quality supported by Audacity, and it is the recommended format, unless your computer is either slow, or running out of disk space.

Set Rate: sets the number of samples per second of the track. 44100 Hz is used by audio CDs. Tracks can have different sample rates in Audacity; they are automatically re-sampled to the project's sample rate (in the lower-left corner of the window).

[MENU]
The "File" Menu

New: creates a new, empty window

Open: opens an audio file or an Audacity project in a new window (unless the current window is empty). To add audio files to an existing project window, use one of the *"import"* commands in the *"project"* menu.

Close: closes the current window, asking you if you want to save changes. In Windows and UNIX, closing the last window will close Audacity, unless you modify this behavior in the *"interface preferences"*.

Save Project: saves everything in the window into an Audacity-specific format. An Audacity project consists of a project file, ending in ".aup", and a project data folder, ending in "_data". For example, if you name your project *"Composition"*, then Audacity will create a file called *"composition.aup"* and a folder called *"composition_data"*. Audacity project files are not meant to be shared with other programs - use one of the *"export"* commands (below) when you have finished editing a file.

Save Project As: same as *"save project"* (above), but gives you the opportunity to rename the file the way you want.

Recent Files: shows a list of recently opened files in Audacity, enabling you to re-open them quickly.

Export as WAV: exports all audio in your project to a WAV file, an industry-standard format for uncompressed audio. You can change the standard file format used for exporting from Audacity by opening *"file format preferences"*. Note that exporting will automatically mix and re-sample all tracks, in case there are 2 or more tracks, or varying sample rates. See also File Formats.

Export Selection As WAV: same as above, but only exports the current selection.

Export as MP3: exports audio as an MP3 file. As MP3 files are compressed, they use less disk space, but they lose some audio quality. Another compress alternative is Ogg Vorbis (see below). You can set the quality of MP3 compression in the File Format Preferences. See also MP3 Exporting.

Export Selection as MP3: same as above, but only exports the current selection.

Export as Ogg Vorbis: exports all audio as an Ogg Vorbis file. Ogg Vorbis files are compressed files, and therefore use less disk space, but they do lose some audio quality. Ogg Vorbis files use a little less disk space then MP3 files but have similar compression quality. Furthermore, Ogg Vorbis is free from patents and licensing restrictions. However, Ogg Vorbis files are not as widespread as MP3. You can set the quality of Ogg compression in the *"file format preferences"*.

Export Selection As Ogg Vorbis: same as above, but only exports the current selection.

Export Labels: *"label track",* if activated, lets you export labels as text files. You can import labels in the same text format using the *"import labels..."* command in the Project Menu.

Export Multiple: lets you split your project into multiple files in just one step. You can either split them vertically (one new file per track), or horizontally (using labels in a "label track" to indicate breaks between exported files.

Page Setup: configures how Audacity will print the track waveforms using the *"print"* option, and which printer to use.

Print: prints the main window view from Audacity, showing tracks and waveforms.

Exit (Quit): closes all windows and exits Audacity, prompting you to save any unsaved changes first.

The "Edit" Menu

Undo: undoes the last editing operation you performed in your project. Audacity supports full-unlimited undo; meaning you can undo every editing operation you made during a session.

Redo: redoes any editing operation that was just undone. After you perform a new editing operation, you can no longer redo the operations that were undone.

Cut: removes the selected audio data and stores it on the clipboard. Only one project can be on the clipboard at a time, but that project may contain multiple tracks.

Copy: copies selected audio data to the clipboard without removing it from the project.

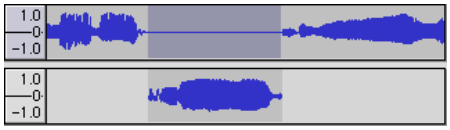
Paste: inserts whatever is on the clipboard at the selected position, or cursor position in the project. This replaces any selected audio data, if any.

Trim: removes everything to the left and right of the selection.

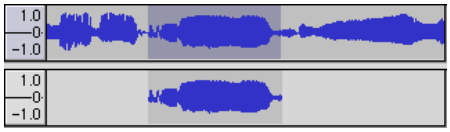
Delete: removes all selected audio data without copying it to the clipboard.

Silence: suppresses all selected audio data, replacing said data with silence, instead of removing it.

Split: moves the selected region into its own track, or tracks. The affected portion of the original track will only have silence. See the figure below:



Duplicate: copies the entire track, a part of it, or a set of tracks into new tracks. See the picture below:



Select ... > All: selects all of the audio in all of the tracks in the project.

Select ... > Start to Cursor: selects everything from the beginning of the selected tracks to the cursor position.

Select ... > Cursor to End: selects from the location of the cursor to the end of the selected tracks.

Find Zero Crossings: modifies the selection slightly, so that both edges, left and right, of the selection appear on a positive-slope zero crossing. This makes it easier to cut and paste audio without resulting in an audible clicking sound.

Selection Save: remembers the current selection (or cursor position), allowing you to restore it later.

Selection Restore: restores the cursor position to the last location as saved by *"selection save"*.

Move Cursor ... > to Track Start: moves the cursor to the start of the selected track.

Move Cursor ... > to Track End: moves the cursor to the end of the selected track.

Move Cursor ... > to Selection Start: moves the cursor to the start of the current selection.

Move Cursor ... > to Selection End: moves the cursor to the end of the current selection.

Snap-To ... > Snap On: enables the *“snap-to”* mode. This mode constrains the selection to the nearest interval on the time scale, by default the nearest second. Therefore, if you click and drag from 4.2 seconds to 9.8 seconds, it results in a selection from precisely 4 seconds to 10 seconds. You can change the units that are snapped to using the *"set selection format"* option in the *“view menu”*.

Snap-To ... > Snap Off: switches the *“snap-to”* mode off, letting you select random time ranges

Preferences: opens the “preferences” dialog box.

The “View” Menu

Zoom In: zooms in on the horizontal axis of the audio, displaying more detail about less time. You can also use the zoom tool to zoom in on a particular part of the window.

Zoom Normal: zooms to the default view, which displays about one inch per second.

Zoom Out: zooms out, displaying less detail about more time.

Fit in Window: zooms out until the entire project just fits in the window.

Fit Vertically: vertically resizes all tracks enabling them to fit inside the window (if possible).

Zoom to Selection: zooms in, or out so the selection fills the window.

Set Selection Format: lets you choose the formatting that is displayed at the bottom of the window, indicating the current selection time. Options include film, video, and audio CD frames, seconds + samples, or pure time. If you enable the *“snap-to”* mode in the *“edit menu”*, the selection snaps to the frames, or other quantifications you have selected in this menu.

History: shows the history window in which all performed actions during the current session, including importing, are displayed. The right-hand column shows the amount of hard disk space your operations have used. You can jump back and forth between editing steps, by simply clicking on the entries in the window. This is the same as selecting *“undo”* or *“redo”* many times in a row. You can also discard the *“undo”* history to save disk space. Whilst working, you can keep the history window open.

Float Control Toolbar: moves the *“control toolbar”* out of the window and into its own floating window, so you can place it wherever you want. The menu item changes to ***“dock control toolbar”***, which you can use to put the toolbar back into the main window.

Float Edit Toolbar: moves the *"edit toolbar"* out of the window and into its own floating window, so you can position it wherever you want. The menu item changes to "***dock edit toolbar"***, which you can use to put the toolbar back into the main window.

Float Meter Toolbar: does the same thing for audacity's VU meters, which you use to set recording levels and adjust playback.

Float Mixer Toolbar: moves the "*mixer toolbar"* out of the window, into its own floating window as above.

The "Project" Menu

Import Audio: imports audio from a standard audio format into your project. Use this command if you already have a couple of tracks, but still want to add another track to the same project, perhaps to mix them together. You cannot use this option to import Audacity Projects. The only way to combine two Audacity Projects is to open them in separate windows, then copy and paste the tracks.

Import Labels: takes a text file containing time codes and labels, and converts them into a *"label track"*.

Import MIDI: imports MIDI files and puts them into a MIDI Track. Audacity can display MIDI files, but **cannot play, edit, or save them yet.**

Import Raw Data: allows you to open a file in virtually any uncompressed format. When you select the file, Audacity analyzes it and tries to guess its format. Its guess percentage is about 90%, therefore you just press on *"OK"* and listening to the result. If it is not correct, however, you can use the options in the dialog box to try some other possible encodings.
At the beginning of your imported track(s), you may notice a little bit of noise. This is probably the file's header, which Audacity was not able to compress. Just zoom in and select the noise with the *"selection tool"*, and then choose *"delete"* from the *"edit menu"*.

Edit ID3 Tags: opens a dialog box, allowing you to edit the ID3 tags associated with a project for MP3 exporting.

Quick Mix: mixes all selected tracks. If you are mixing stereo tracks, or mixing tracks that are marked as *"left or right channel"*, they result in a stereo track (two channels). Otherwise, the result will be mono.
Whenever you press the Play button and whenever you export, your tracks are implicitly mixed. This command offers a way to do it permanently and save the results to the disk, saving space on the playback resources.
Note that if you try to mix two very loud tracks together, you may get clipping (it will sound like pops, clicks, and noise). To avoid this, drag down the gain slider on the tracks in order to reduce their volume before mixing.

New Audio Track: creates a new, empty audio track. As importing, recording, and mixing automatically creates new tracks as needed, this command is hardly needed.

However, you can use this command to cut, or copy, data from an existing track and paste it into a blank track. If that track was at a non-default rate, then you may need to use *"set rate"* from the *"track pop-down"* menu to set the correct sample rate.

New Stereo Track: see above, but this command creates a stereo track. You can also create a stereo track by joining two tracks using the *"track pop-down"* menu.

New Label Track: creates a new label track, which can be very useful for textual annotation.

New Time Track: creates a new time track, which varies the playback speed over time.

Remove Tracks: removes the selected track, or tracks from the project. Even if you have only selected a part of a track, this feature removes the entire track. You can also delete a track by clicking on the X in its upper-left corner. To cut out only a part of the audio in a track, use *"delete"* or *"silence"*.

Align Tracks: all align functions only function with complete tracks, or groups of tracks, rather than on selections, even if they span across multiple tracks. They all operate by time-shifting tracks (moving them left or right), making it easier to synchronize tracks or get rid of silences at the beginning. The cursor or selection stays in the same place unless you use *"align and move cursor..."*, see below.

Align and move cursor: this functions the same as the above, except that the cursor or selection is moved along with the tracks. That allows you to shift the tracks without losing your relative place.

Add Label at Selection: creates a new label at the current selection. You can title the label by typing on the keyboard and then press the *"enter"* or *"return"* key when you are done.

Add Label at Playback Position: creates a new label at the location where you currently are playing or recording. You can use this to mark a sequence while you listen to that. You can title the label by typing on the keyboard and then press the *"enter"* or *"return"* key when you are done. This feature is only available if Audacity is running.

The "Generate" Menu

If you choose an item from the *"generate"* menu without any tracks in a project, a new track is created. Otherwise, the current track is used. If a track is selected and the cursor is placed in a single place on the track, audio is inserted at the cursor position. The default duration of this operation is 30 seconds. The audio created will replace the any selection; otherwise, it is inserted into the track, shifting up later parts of the track.

Silence: inserts silence

Tone: creates a *“sine wave”, “square wave”,* or *“Sawtooth wave”*.

White Noise: inserts random audio samples, sounding like pure static.

Any items, which appear after these three built-ins, are VST, Ladspa, or Nyquist plug-ins. A poorly written plug-in may crash Audacity, so always save your work before using a plug-in. Note that any effect that does not take any audio as input will automatically be placed in the Generate menu.

The “Effect” Menu

The items in this menu only function if you have selected some audio. Audacity does not have any real-time effects; you must select the audio yourself, apply an effect, and then listen to the results. Most effects have a *“preview”* button. Clicking this button plays up to three seconds of audio, allowing you to hear what it will sound like once the effect is applied. This is useful for fine-tuning the effect parameters.

Repeat Last Effect: a shortcut to apply the most recent effect with the same settings. This is a convenient manner to apply the same effect to many different parts of a file in a quick way.

Amplify: changes the volume of the selected audio. If you click the *"allow clipping"* checkbox, it will let you amplify so much that the audio ends up beyond the range of the waveform, clipping it (distorting). The default value after you open the effect, is to amplify in such a manner that the loudest part of the selection is as loud as possible without distortion.

Bass Boost: enhances the bass frequencies in the audio.

Change Pitch: changes the pitch/frequency of the selected audio without changing the pace. When you open the dialog box, the starting frequency is set to Audacity's best guess related to the selected frequency. This works very well for recordings of singing or musical instruments without background noise. You can specify the pitch change in one of the following four different ways: musical note, semi-tones, frequency, or percent change.

Change Speed: changes the audio speed by re-sampling. Increasing the speed also increases the pitch, and vice versa. This will change the length of the selection.

Change Tempo: changes the tempo (pace) of the audio, without changing the pitch. Obviously, this changes the length of the selection.

Compressor: compresses the dynamic range of the selection. Loud parts will be softer while keeping the volume of the soft parts the same. You can optionally normalize the recording afterwards, resulting in the entire piece having a higher perceived volume.

Echo: this very simple effect repeats the selection with a descending sound, like a series of echoes. This effect does not change the length of the selection, so you may

want to add silence to the end of the track before applying it (using the *“generate menu”*).

Equalization: boosts or reduces random frequencies. You can select one of a number of different curves designed to equalize the sound of some popular record manufacturers, or draw your own curve.

Fade In: fades the selection in linearly

Fade Out: fades the selection out linearly

FFT Filter: similar to *“equalization”*, lets you enhance or reduce random frequencies. The curve uses a linear scale for frequency.

Invert: vertically flips the waveform, just as a phase inversion in the analogue domain.

Noise Removal: cleans up any noise from a recording. First, select a small piece of audio that is silent except for the noise, select *"noise removal"*, and click on the *"get noise profile"* button. Then select all of the audio you want filtered, and re-select "n*oise removal"*. Now click on the *"remove noise"* button. You can experiment with the slider to try to remove more or less noise. It is normal for noise removal to result in some distortion. It works best when the audio signal is much louder than the noise.

Normalize: corrects the DC offset (a vertical displacement of the track) and/or amplifies a track as such, that the maximum amplitude is a fixed amount: -3 dB. It is useful to normalize all your tracks before mixing. If you have many tracks, you may need to use the track’s gain sliders to turn some down.

Nyquist Prompt: this is for advanced users only! This function allows you to express random transformations, using a powerful functional programming language. See the Nyquist section of the Audacity website for more information.

Phaser: the name *"Phaser"* comes from *"phase shifter",* because it combines phase-shifted signals with the original signal. Move the phase-shifted signals by using a low frequency oscillator (LFO).

Repeat: repeats the selection a certain number of times. This operation is quite fast and space-efficient, so it is practical to use it to create nearly infinite loops.

Reverse: reverses the selected audio temporally. Once in place, the end of the audio will be heard first, and the beginning last.

Wahwah - uses a moving band pass filter to create its sound. A low frequency oscillator (LFO) is used to control the movement of the filter throughout the frequency spectrum. The wahwah adjusts the phase of the left and right channels when given a stereo selection, so that the effect seems to travel across the speakers.

Plugins 1 to 15 (etc).**:** these sub-menus contain any VST, Ladspa, or Nyquist plug-ins, as loaded by audacity. It is possible for a poorly written plug-in to crash Audacity, so always save your work before using a plug-in effect.

The "Analyze" Menu

Plot Spectrum: prior to using this feature, you must select an audio section from a single track first. Then select *"plot spectrum"*. This opens a window displaying the power spectrum of the audio over said section, calculated using the "*fast Fourier transform"*. This graph represents the amount of energy in each frequency. As you move the mouse over the display, it shows you the nearest peak frequency. This window also can display other common functions that are calculated using the "*fast Fourier transform",* including three versions of the *"autocorrelation"* function. The "*enhanced autocorrelation"* function is very good at identifying the pitch of a note.

The *"analyze"* menu is used for effects and plug-in effects, which do not modify the audio, but simply open a dialog box with some descriptive information. Audacity also supports Analyze commands that create annotations in a Label Track.

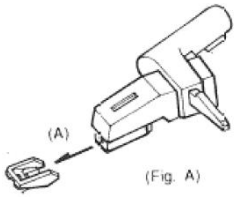
The "Help" Menu

About Audacity: displays the version number and credits. If you have installed Audacity yourself, check here to verify which optional modules were successfully compiled.

Contents: opens this reference guide in a searchable form.

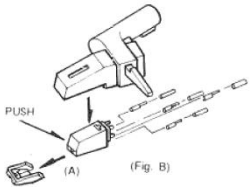
Maintenance

How to replace the stylus



- Lock the tone arm.
- Remove the protective cap from the stylus.
- Pull the stylus in the direction of the arrow (A) and remove it.
- Put in the new stylus following the reverse procedure.
- Replace the protective cap on the stylus.

How to disassemble the cartridge



- Lock the tone arm.
- Remove the stylus (see section above).
- Release the pick-up head by pushing the cartridge in the direction of the arrow.
- Disconnect the four wires at the level of the pick-up head.

How to install a new cartridge

- Connect the link wires.
- Push the cartridge into the head shell
- Re-position the stylus
- Place the protective cap on the stylus.

Recommendations from Lenco

- Clean your records with a rag, impregnated with an antistatic product.
- Replace the stylus approximately every 250 playing hours. An old cartridge wears out the records much faster.
- Clean the stylus regularly with a soft brush dipped in alcohol.
- When transporting the turntable, do not forget to place the protective cap on the stylus and put the clip of the armrest on the tone arm.

Trouble shooting

Problem	Solution
Does not play / platter does not rotate	Check if the power cable is connected to the AC wall outlet.
	Check if the main power switch, on the backside of the turntable, is switched on.
	Check if the belt is mounted correctly.
Tone arm does not touch the platter	Check if the tone arm lever is lowered.
The sound is distorted	Check if the stylus protection cover has been removed.
	Check if the RPM set is set correctly
	Check if the audio cables are properly connected, i.e. that they are NOT connected to a phone connection.
	Check the needle pressure and Anti-Skating.
	Clean the needle with a soft brush dipped in alcohol.
The record skips	Check the needle pressure and Anti-Skating.
The last part of the record isn't played	Set the auto return switch to off.
The auto return function does not work	Set the auto return switch to on.
No or distorted sound while recording records via Audacity	Check the computer and Audacity settings.

Specifications

Power consumption		Operation	10 Watt	
		Standby	< 1 Watt	
Drive	Belt drive	Rubber belt		
Amplifier	Yes	Built in pre-amplifier		
Platter rotating speed		33 / 45 RPM		
Adjustable counter weight		Yes		
Anti-skating		Yes		
System	Headshell	Removable	Yes	
	Cartridge	Moving magnet		
		Stylus tip	Bonded diamond	0.6 mm
			Sphere shaped	
	Model number		CR-2861	
	Replacement model		CN-259	
Connections	Line output			
	USB output	USB 1.1		
		Compatible	Windows XP, Windows Vista Home & higher, Windows 7 Home & higher, OS X10.4 and higher	
	AC power cord	110-230 Volt		
Materials	Housing	Wooden case in walnut veneering		
	Platter	Aluminum		
		Diameter	332 mm	
	Dust cover and hinges		Plastic	
	Tone arm	Aluminum		
Dimensions	Without dust cover		450 x 367.5 x 120 mm	
	With dust cover closed		450 x 367.5 x 130 mm	
	With dust cover opened		450 x 367.5 x 400 mm	
Weight	4.62 KG			

Spare parts list

Description	Spare parts number	Order Qty
Dust cover	L90-104	1
Hinge	L90-105	2
System with needle	L90-116	1
Cartridge	L90-113	1
Counterweight	L90-115	1
Belt	L90-119	1
Single Puck	L90-125	1

Safety instructions

IMPORTANT SAFETY INSTRUCTIONS - READ CAREFULLY BEFORE USE.

CAUTION

RISK OF ELECTRICAL SHOCK

DO NOT OPEN

CAUTION: TO PREVENT AN ELECTRICAL SHOCK, DO NOT REMOVE ANY COVER SCREWS. THERE ARE NO USER SERVICEABLE PARTS INSIDE. REQUEST A QUALIFIED SERVICE PERSON TO PERFORM SERVICING.

This symbol indicates that there are important operating maintenance instructions in the user manual accompanying this turntable.

This symbol indicates that dangerous voltage is present within this turntable, constituting a risk of electric shock or personal injury.

Keep these instructions in mind:

- Do not use this turntable near water.
- Clean only with a slightly damp cloth.
- Do not cover or block any ventilation opening. When placing the turntable on a shelf, leave 5 cm (2”) free space around the whole turntable.
- Install in accordance with the supplied user manual.
- Don’t step on or pinch the power cord. Be very careful, particularly near the plugs and the cable’s exit point. Do not place heavy items on the power cord, which may damage it. Keep the entire turntable out of children’s reach! When playing with the power cable, they can seriously injure themselves.
- Unplug this turntable during lightning storms or when unused for a long period.
- Keep the turntable away from heat sources such as radiators, heaters, stoves, candles and other heat-generating products.
- Avoid using the device near strong magnetic fields.

- ESD can disturb normal usage of this turntable. If so, simply reset and restart the device following the instruction manual. During file transmission, please handle with care and operate in a static-free environment.

Safety instructions - continued

- WARNING! NEVER INSERT AN OBJECT INTO THE PRODUCT THROUGH THE VENTS OR OPENINGS. HIGH VOLTAGE FLOWS THRU THE PRODUCT AND INSERTING AN OBJECT CAN CAUSE ELECTRIC SHOCK AND/OR SHORT CIRCUIT INTERNAL PARTS. FOR THE SAME REASON, DO NOT SPILL WATER OR LIQUID ON THE PRODUCT.
- Do NOT use in wet or moist areas such as bathrooms, steamy kitchens or near swimming pools.
- Do not use this turntable when condensation may occur.

This turntable is produced according to all current safety regulations. The following safety tips should safeguard users against careless use and dangers involved with such use.

- Although this turntable is manufactured with the utmost care, and checked several times before leaving the factory, it is still possible that problems may occur, as with all electrical appliances. If you notice smoke, an excessive build-up of heat or any other unexpected phenomena, you should disconnect the plug from the main power socket immediately.
- This turntable must be well ventilated at all time!
- This turntable must operate on a power source as specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company.
- The socket outlet must be installed near the equipment and must be easily accessible.
- Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
- Turntables with a Class 2 power cord do not require an earthed connection.
- Keep away from rodents. Rodents enjoy biting on power cords.
- Always hold the plug when pulling out the plug from the main supply socket. Do not pull the power cord. This can cause a short circuit.
- Avoid placing the turntable on any surfaces that may be subject to vibrations or shocks.
- To protect the turntable during a thunderstorm unplug the AC power cable.
- When the turntable is not used for long periods, unplug the AC power cable for safety reasons.
- To clean the turntable, use a soft dry cloth. Do NOT use solvents or petrol based fluids. For stubborn stains, you may use a damp cloth with a diluted detergent.
- We are not responsible for damage or lost data caused by malfunction, misuse, modification of the device.

WARNING: long term exposure to loud sounds may lead to temporary or permanent hearing impairment.

Declaration of Conformity

Products with the CE marking comply with the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community.

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Service and support

For questions about the software please visit http://audacity.sourceforge.net
For information and support about the hardware: www.lenco.eu

Lenco helpdesk:

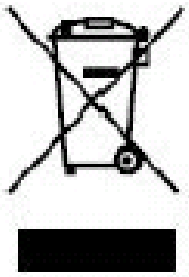
Germany	0900-1520530	(Local charges)
The Netherlands	0900-23553626	(Local charges + 1ct P/min)
Belgium	02-6200115	(Local charges)
France	0170480005	(Local charges)

The helpdesk is accessible from Monday till Friday from 9 AM till 6 PM.
In case your device needs repair our helpdesk will redirect you to your local dealer.

Lenco offers service and warranty in accordance to European law, which means that in case of repair (both during and after the warranty period), you should contact your local dealer. **Please note**: It is not possible to send repairs to Lenco directly.

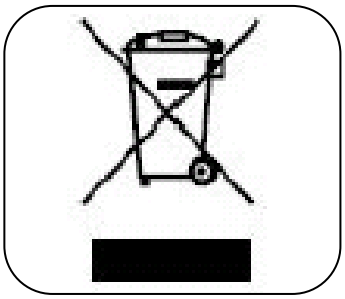
Important note: If the unit is opened by a non-official service center the warranty expires.

End of life



This symbol indicates that the relevant electrical product or battery should not be disposed of as general household waste in Europe. To ensure the correct waste treatment of the product and battery, please dispose them in accordance to any applicable local laws of requirement for disposal of electrical equipment or batteries. In so doing, you will help to conserve natural resources and improve standards of environmental protection in treatment and disposal of electrical waste (Waste Electrical and Electronic Equipment Directive).

When you see a crossed-out wheeled waste container on the product. It means that the product falls under the EU directive 2002/96/EC.



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